

Section 1. Identification

Product identifier : NOxOUT[®] A

SDS # : 310

Other means of identification

Product code(s) : NOXOUTA

Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Pollution control products. Industrial emissions (integrated pollution prevention and control) - Air

Supplier's details : PCS Sales (USA), Inc. (A Subsidiary of Nutrien Ltd.)
1101 Skokie Blvd.
Suite 500
Northbrook, IL 60062

PCS Sales (Canada), Inc. (A Subsidiary of Nutrien Ltd.)
Suite 500
122 1st Avenue South
Saskatoon, Saskatchewan Canada S7K 7G3

Company phone number (North America):
1-800-524-0132 (Customer Service)

sds@nutrien.com - www.nutrien.com

Emergency telephone number (with hours of operation) : Nutrien North American
24 HOUR EMERGENCY TELEPHONE NUMBERS:

English:
Transportation Emergencies: 1-800-792-8311
Medical Emergencies: 1-303-389-1653

French or Spanish:
Transportation or Medical Emergencies: 1-303-389-1654

Section 2. Hazard identification

Classification of the substance or mixture : Not classified.

OSHA/HCS status : While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

GHS label elements

Hazard pictograms : **Not Applicable.**
No Aplicable.
Non applicable.

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Section 2. Hazard identification

Precautionary statements

General	: Not applicable.
Prevention	: Not applicable.
Response	: Not applicable.
Storage	: Not applicable.
Disposal	: Not applicable.
Supplemental label elements	: None known.
Other hazards which do not result in classification	: None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
Urea	49 - 51	57-13-6
Water	47 - 51	7732-18-5
NOxOUT® A solution	0.5	-
Ammonia	< 0.5	7664-41-7
Imidodicarbonic diamide	< 0.5	108-19-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	: Remove person to fresh air. No known significant effects. Seek medical attention for any signs of wheezing and/or breathing difficulties. For additional advice call the medical emergency number on this SDS or your poison center or medical provider.
Skin contact	: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	: No known significant effects or critical hazards.
Inhalation	: No known significant effects or critical hazards. May cause slight transient irritation. Effects are not sufficient for classification as hazardous.
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards. May be irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact	: No specific data. May cause slight transient irritation.
--------------------	--

Section 4. First-aid measures

- Inhalation** : No specific data. May cause slight transient irritation.
- Skin contact** : No specific data.
- Ingestion** : No specific data. May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. For professional, multilingual, medical support, in case of medical emergencies involving Nutrien products, telephone the 24 hour Emergency Number: From Canada or the U.S., English: 1-303-389-1653; French or Spanish: 1-303-389-1654. From all other countries, English: 00-1-303-389-1653; French or Spanish: 00-1-303-389-1654.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. Mouth-to-mouth resuscitation of oral exposure patients is not recommended. First-aiders with contaminated clothing should be properly decontaminated.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Non-flammable. Material will not burn. Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Contain and collect the water used to fight the fire for later treatment and disposal.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused adverse impacts (sewers, waterways, soil or air).

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Pump spilled material to a suitable, labeled container for recycling or disposal. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing.
- Advice on general occupational hygiene** : Do not ingest. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

- Conditions for safe storage, including any incompatibilities** : Do not store below the following temperature: 16°C (60.8°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Canadian Regulations:	CA Alberta Provincial: Particulates not otherwise regulated (PNOR) TWA (8 hours), Total dust: 10 mg/m ³ ; Respirable fraction: 3 mg/m ³ .
U.S. Federal Regulations:	None assigned.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: sealed eyewear

Section 8. Exposure controls/personal protection

Skin protection

- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Hazard of slipping on spilled product. Use slip resistant footwear.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear to slightly hazy liquid.]
- Color** : Clear. Colorless.
- Odor** : Aromatic. Ammoniacal.
- Odor threshold** : Not available.
- pH** : 9.5 [Conc. (% w/w): 100%]
- Melting point** : 15.6°C (60.1 °F)
- Boiling point** : Not available.
- Flash point** : Not applicable.
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Not applicable.
- Vapor pressure** : Not available.
- Vapor density** : Not available.
- Relative density** : 1.14
Bulk density: 9.5 lbs/gal; 1.14 Kg/L
- Solubility** : Partially soluble in the following materials: cold water and hot water.
- Solubility in water** : Miscible in water.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- Viscosity** : Dynamic (room temperature): 4 mPa·s (4 cP)

Section 10. Stability and reactivity

- Reactivity** : Not considered to be reactive.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.

Section 10. Stability and reactivity

Incompatible materials : Incompatible with copper alloys, copper, and zinc. Incompatible with halogens, hydrogen peroxide, chlorinated hydrocarbons, fluorine, nitric acid, oxidizing agents and sulfuric acid. May be incompatible with some materials of construction. Contact your sales representative or a metallurgical specialist to ensure compatibility with your equipment.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Urea	LD50 Oral	Rat	8471 mg/kg	

Conclusion/Summary : Not considered to be acutely toxic.

Irritation/Corrosion

Not available.

Conclusion/Summary

- Skin** : Non-irritating to the skin.
- Eyes** : Non-irritating to the eyes.
- Respiratory** : Non-irritating to the respiratory system.

Sensitization

Not available.

Conclusion/Summary

- Skin** : No known significant effects or critical hazards.
- Respiratory** : No known significant effects or critical hazards.

Mutagenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Carcinogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Teratogenicity

Not available.

Conclusion/Summary : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Section 11. Toxicological information

Information on the likely routes of exposure : Not available.

Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards. May cause slight transient irritation. Effects are not sufficient for classification as hazardous.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards. May be irritating to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data. May cause slight transient irritation.
- Inhalation** : No specific data. May cause slight transient irritation.
- Skin contact** : No specific data.
- Ingestion** : No specific data. May cause irritation of the digestive tract with accompanying nausea, vomiting and diarrhea.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : See above.
- Potential delayed effects** : See above.

Long term exposure

- Potential immediate effects** : See above.
- Potential delayed effects** : See below.

Potential chronic health effects

- Conclusion/Summary** : No known significant effects or critical hazards.
- General** : No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** : No known significant effects or critical hazards.
- Fertility effects** : No known significant effects or critical hazards.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Urea	Acute EC50 3910 mg/l Fresh water	Daphnia magna	48 hours
	Acute LC50 5 mg/l Fresh water	Fish	96 hours
	LC50 1000 mg/l	Crustaceans	48 hours

Conclusion/Summary : Excessive nutrient runoff to a body of water may result in eutrophication. May be harmful to the environment if released in large quantities.

Persistence and degradability

Conclusion/Summary : Not persistent.

Section 12. Ecological information

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.0.037

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	TDG Classification	DOT Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	-	-	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL and the IBC Code : Not available.

Section 15. Regulatory information

Canadian lists

- Canadian NPRI** : None of the components are listed.
CEPA Toxic substances : None of the components are listed.
Canada inventory : All components are listed or exempted.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
China : All components are listed or exempted.
Europe : All components are listed or exempted.
Japan : **Japan inventory (ENCS)**: Not determined.
Japan inventory (ISHL): Not determined.
Malaysia : Not determined
New Zealand : All components are listed or exempted.
Philippines : Not determined.
Republic of Korea : All components are listed or exempted.
Taiwan : All components are listed or exempted.
Turkey : Not determined.

- U.S. Federal Regulations:** : **TSCA 4(a) final test rules**: imidodicarbonic diamide
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
TSCA 8(b) Active inventory: All components are listed or exempted.
Clean Water Act (CWA) 311: ammonia, anhydrous

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304 Composition/information on ingredients

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

Section 15. Regulatory information

State regulations

- Massachusetts** : None of the components are listed.
- New York** : None of the components are listed.
- New Jersey** : None of the components are listed.
- Pennsylvania** : None of the components are listed.
- California Prop. 65** : This product, as manufactured, does NOT contain any substance in concentrations known to the state of California to cause cancer, birth defects or other reproductive harm. Nutrien cannot guarantee the downstream compliance of any product once out of Nutrien custody.

Section 16. Other information

History

- Date of issue/Date of revision** : 5/23/2019
- Date of previous issue** : 1/31/2018
- Version** : 2.1

☑ **Indicates information that has changed from previously issued version.**
General format change.

- Key to abbreviations** :
- ATE = Acute Toxicity Estimate
 - BCF = Bioconcentration Factor
 - GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 - IATA = International Air Transport Association
 - IBC = Intermediate Bulk Container
 - IMDG = International Maritime Dangerous Goods
 - LogPow = logarithm of the octanol/water partition coefficient
 - MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 - UN = United Nations
 - HPR = Hazardous Products Regulations

Procedure used to derive the classification

Classification	Justification
	Weight of evidence

- References** :
- Transportation of Dangerous Goods Act and Clear Language Regulations, current edition at time of SDS preparation, Transport Canada;
 - Hazardous Products Act and Regulations, current revision at time of SDS preparation, Health Canada;
 - Domestic Substances List, current revision at time of SDS preparation, Environment Canada;
 - 29 CFR Part 1910, current revision at time of SDS preparation, U.S. Occupational Safety and Health Administration;
 - 40 CFR Parts 1-799, current revision at time of SDS preparation, U.S. Environmental Protection Agency;
 - 49 CFR Parts 1-199, current revision at time of SDS preparation, U.S. Department of Transport;
 - Mexican Official Standard NOM-018-STPS-2015, Harmonised System for the Identification and Communication of Hazards and Risks by Hazardous Chemicals in the Workplace;
 - NORMA Oficial Mexicana NOM-010-STPS-2014, Agentes químicos contaminantes del ambiente laboral-Reconocimiento, evaluación y control.
 - Mexican Official Standard NOM-002-SCT / 2011, List of the most commonly transported hazardous substances and materials;
 - Threshold Limit Values for Chemical Substances, current edition at time of SDS preparation, American Conference of Governmental Industrial Hygienists;
 - NFPA 400, National Fire Codes, National Fire Protection Association, current edition

Section 16. Other information

at time of SDS preparation;
 NFPA 704, National Fire Codes, National Fire Protection Association, current edition
 at time of SDS preparation;
 Corrosion Data Survey, Sixth Edition, 1985, National Association of Corrosion
 Engineers;
 ERG 2016, Emergency Response Guidebook, U.S. Department of Transport,
 Transport Canada, and the Secretariat of Transportation and Communications of
 Mexico
 Hazardous Substances Data Bank, current revision at time of SDS preparation,
 National Library of Medicine, Bethesda, Maryland
 Integrated Risk Information System, current revision at time of SDS preparation, U.
 S. Environmental Protection Agency, Washington, D.C.
 Pocket Guide to Chemical Hazards, current revision at time of SDS preparation,
 National Institute for Occupational Safety and Health, Cincinnati, Ohio ;
 Agency for Toxic Substances and Disease Registry Databank, current revision at
 time of SDS preparation, U.S. Department of Health and Human Services, Atlanta,
 Georgia
 National Toxicology Program, Report on Carcinogens, Division of the National
 Institute of Environmental Health Sciences, Research Triangle Park, North Carolina.
 Registry of Toxic Effects of Chemical Substances. National Institute for
 Occupational Safety and Health, Cincinnati, Ohio
 California Code of Regulations, Title 27, Div 4, Chapter 1, Proposition 65 Aug 30,
 2018 rev and current updates

[Notice to reader](#)

DISCLAIMER AND LIMITATION OF LIABILITY

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS. This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.

FURTHERMORE, THE RECIPIENT ASSUMES ALL RISK IN CONNECTION WITH THE USE OF THE MATERIAL. THE RECIPIENT ASSUMES ALL RESPONSIBILITY FOR ENSURING THE MATERIAL IS USED IN A SAFE MANNER IN COMPLIANCE WITH APPLICABLE ENVIRONMENTAL, HEALTH, SAFETY AND SECURITY LAWS, POLICIES AND GUIDELINES. THE SUPPLIER DOES NOT WARRANT THE MERCHANTABILITY OF THE MATERIAL OR THE FITNESS OF THE MATERIAL FOR ANY PARTICULAR USE AND ASSUMES NO RESPONSIBILITY FOR INJURY OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY OR RELATED TO THE USE OF THE MATERIAL.